

Source File: ~/1337/41/lab41. (C|CPP|cpp|c++|cc|cxx|cp)
Input: Standard Input
Output: Standard Output
Value: 1

Write a program that reads from standard input character-by-character. The input is of unknown length; however, input can terminate when the end-of-data marker is encountered. As the input is read, the characters should be written to standard output so that all uppercase letters are changed to lowercase, all digit and punctuation characters are stripped, and all other characters are written unchanged.

A sample execution sequence is shown in Figure 1. To use the Makefile as distributed in class, add a target of lab41 to targets1srcfile.

```
1 newuser@csunix ~> cd 1337
2 newuser@csunix ~/1337> mkdir 41
3 newuser@csunix ~/1337> cd 41
4 newuser@csunix ~/1337/41> cp /usr/local/1337/data/41/* .
5 newuser@csunix ~/1337/41> cp /usr/local/1337/src/Makefile .
6 newuser@csunix ~/1337/41> touch lab41.cpp
7 newuser@csunix ~/1337/41> # Edit Makefile and lab41.cpp
8 newuser@csunix ~/1337/41> make lab41
9 g++ -g -Wall -std=c++11 -c lab41.cpp -I/usr/local/1337/include -I.
10 g++ -o lab41 lab41.o -L/usr/local/1337/lib -lm -lbits
11 newuser@csunix ~/1337/41> cat 01.dat
12 1992 1993 1994
13 This is a test of your word analysis program.
14 How many words did you find that begin with a vowel?
15 WHAT ABOUT STARTING WITH AN S OR ENDING IN AN s?
16 Mary said, "I like C++."
17 newuser@csunix ~/1337/41> cat 01.dat | ./lab41
18 Your Name - CS 1337 - Lab 41
19
20
21 this is a test of your word analysis program
22 how many words did you find that begin with a vowel
23 what about starting with an s or ending in an s
24 mary said i like c
25 newuser@csunix ~/1337/41> cat 01.dat | ./lab41 > my.out
26 newuser@csunix ~/1337/41> diff 01.out my.out
27 newuser@csunix ~/1337/41> cat 04.dat | ./lab41 > my.out
28 newuser@csunix ~/1337/41> diff 04.out my.out
29 newuser@csunix ~/1337/41>
```

Figure 1. Commands to Compile, Link, & Run Lab 41